

ASMS NEWS & VIEWS

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ASMS News & Views
Edited by Gavin Reid

**FOCUS: USING ELECTRONS AND RADICAL CHEMISTRY TO CHARACTERIZE
BIOLOGICAL MOLECULES: EDITORIAL**

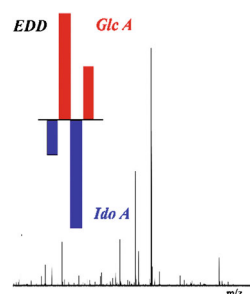
1739–1740

Focus Honoring Dr. Kristina “Kicki” Håkansson, Recipient
of the 2016 Biemann Medal
R.A.J. O’Hair

**FOCUS: USING ELECTRONS AND RADICAL CHEMISTRY TO CHARACTERIZE
BIOLOGICAL MOLECULES: RESEARCH ARTICLES ORIGINAL**

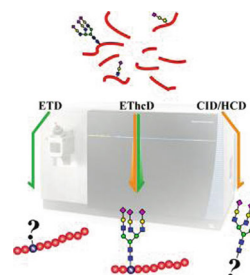
1741–1750

Single Stage Tandem Mass Spectrometry Assignment
of the C-5 Uronic Acid Stereochemistry in Heparan Sulfate
Tetrasaccharides using Electron Detachment Dissociation
I. Agyekum, C. Zong, G.-J. Boons, and I.J. Amster



1751–1764

Electron-Transfer/Higher-Energy Collision Dissociation
(EThcD)-Enabled Intact Glycopeptide/Glycoproteome
Characterization
*Q. Yu, B. Wang, Z. Chen, G. Urabe, M.S. Glover, X. Shi,
L.-W. Guo, K.C. Kent, and L. Li*



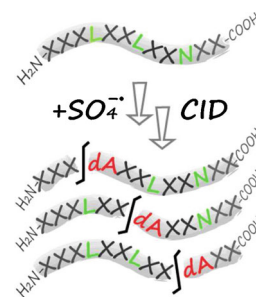
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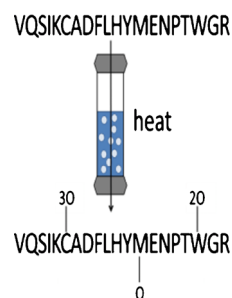
1765–1774

The Generation of Dehydroalanine Residues in Protonated Polypeptides:
Ion/Ion Reactions for Introducing Selective Cleavages
Z. Peng, J. Bu, and S.A. McLuckey



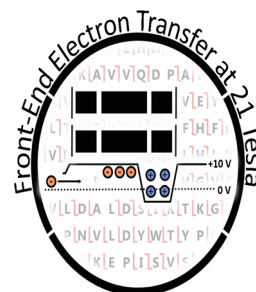
1775–1786

Subcritical Water Hydrolysis of Peptides: Amino Acid
Side-Chain Modifications
T. Powell, S. Bowra, and H.J. Cooper



1787–1795

Front-End Electron Transfer Dissociation Coupled to a 21 Tesla
FT-ICR Mass Spectrometer for Intact Protein Sequence Analysis
C.R. Weisbrod, N.K. Kaiser, J.E.P. Syka, L. Early, C. Mullen,
J.-J. Dunyach, A.M. English, L.C. Anderson, G.T. Blakney,
J. Shabanowitz, C.L. Hendrickson, A.G. Marshall, and D.F. Hunt



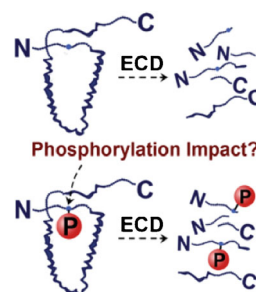
1796–1804

Intact Protein Analysis at 21 Tesla and X-Ray Crystallography Define
Structural Differences in Single Amino Acid Variants of Human
Mitochondrial Branched-Chain Amino Acid Aminotransferase 2 (BCAT2)
L.C. Anderson, M. Håkansson, B. Walse, and C.L. Nilsson



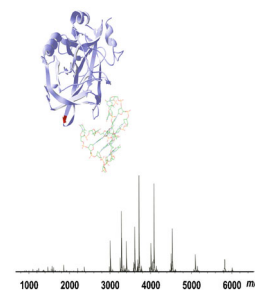
1805–1814

The Impact of Phosphorylation on Electron Capture Dissociation
of Proteins: A Top-Down Perspective
B. Chen, X. Guo, T. Tucholski, Z. Lin, S. McIlwain, and Y. Ge

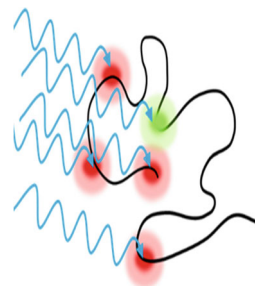


1815–1822

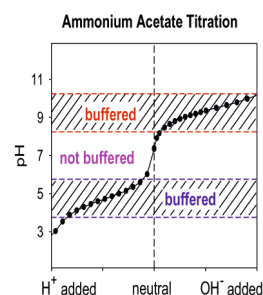
Structural Characterization of a Thrombin-Aptamer Complex by High Resolution Native Top-Down Mass Spectrometry
J. Zhang, R.R.O. Loo, and J.A. Loo

**CRITICAL INSIGHTS****1823–1826**

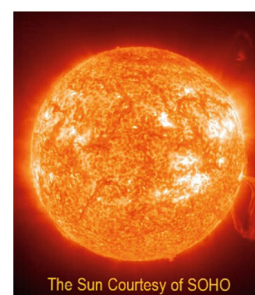
The Mechanism Behind Top-Down UVPD Experiments: Making Sense of Apparent Contradictions
R.R. Julian

**1827–1835**

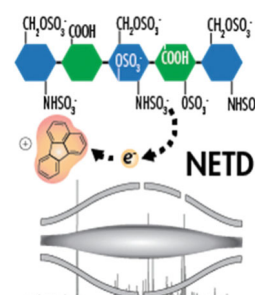
Addressing a Common Misconception: Ammonium Acetate as Neutral pH “Buffer” for Native Electrospray Mass Spectrometry
L. Konermann

**1836–1843**

Mass Defect from Nuclear Physics to Mass Spectral Analysis
S. Pourshahian

**RESEARCH ARTICLES****1844–1854**

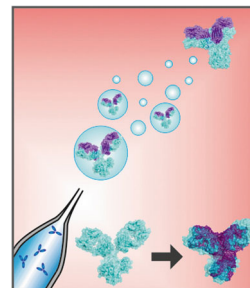
Negative Electron Transfer Dissociation Sequencing of Increasingly Sulfated Glycosaminoglycan Oligosaccharides on an Orbitrap Mass Spectrometer
F.E. Leach III, N.M. Riley, M.S. Westphall, J.J. Coon, and I.J. Amster



1855–1862

Investigating the Structural Compaction of Biomolecules Upon Transition to the Gas-Phase Using ESI-TWIMS-MS

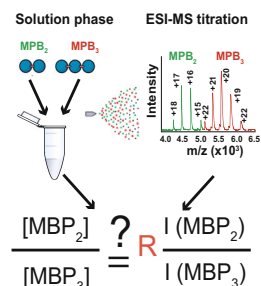
P.W.A. Devine, H.C. Fisher, A.N. Calabrese, F. Whelan, D.R. Higazi, J.R. Potts, D.C. Lowe, S.E. Radford, and A.E. Ashcroft



1863–1875

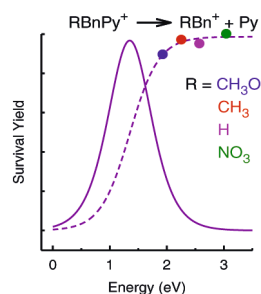
Insight into Signal Response of Protein Ions in Native ESI-MS from the Analysis of Model Mixtures of Covalently Linked Protein Oligomers

K. Root, Y. Wittwer, K. Barylyuk, U. Anders, and R. Zenobi



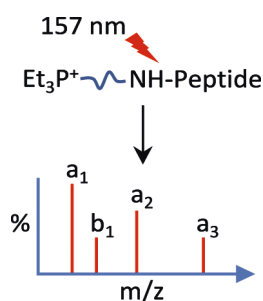
1876–1888

How Hot are Your Ions Really? A Threshold Collision-Induced Dissociation Study of Substituted Benzylpyridinium “Thermometer” Ions
J.E. Carpenter, C.P. McNary, A. Furin, A.F. Sweeney, and P.B. Armentrout



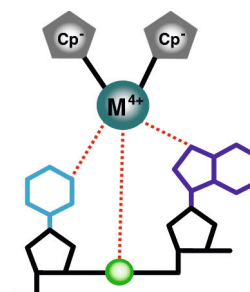
1889–1900

A Novel Triethylphosphonium Charge Tag on Peptides: Synthesis, Derivatization, and Fragmentation
N. DeGraan-Weber, S.A. Ward, and J.P. Reilly



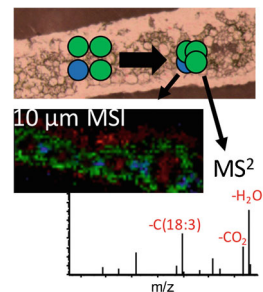
1901–1909

Specific Interactions of Antitumor Metallocenes with Deoxydinucleoside Monophosphates
R.P. Eberle, Y. Hari, and S. Schürch

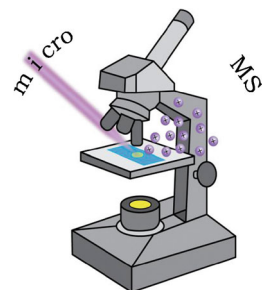


1910–1918

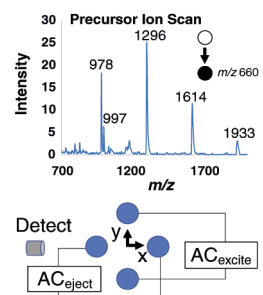
Overlapping MALDI-Mass Spectrometry Imaging for In-Parallel MS and MS/MS Data Acquisition without Sacrificing Spatial Resolution
R.L. Hansen and Y.J. Lee

**1919–1928**

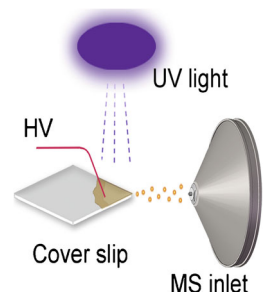
microMS: A Python Platform for Image-Guided Mass Spectrometry Profiling
T.J. Comi, E.K. Neumann, T.D. Do, and J.V. Sweedler

**1929–1938**

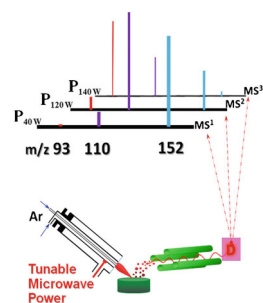
Single Analyzer Precursor Ion Scans in a Linear Quadrupole Ion Trap Using Orthogonal Double Resonance Excitation
D.T. Snyder and R.G. Cooks

**1939–1946**

Substrate-Coated Illumination Droplet Spray Ionization: Real-Time Monitoring of Photocatalytic Reactions
H. Zhang, N. Li, D. Zhao, J. Jiang, and H. You

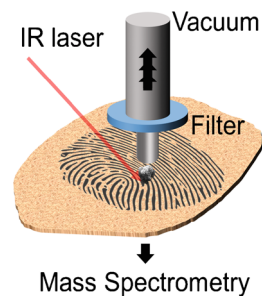
**1947–1957**

Fast Determination of Ingredients in Solid Pharmaceuticals by Microwave-Enhanced In-Source Decay of Microwave Plasma Torch Mass Spectrometry
R. Su, X. Wang, C. Hou, M. Yang, K. Huang, and H. Chen



1958–1964

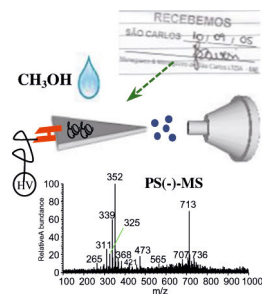
Infrared Laser Ablation with Vacuum Capture for Fingerprint Sampling
F. Donnarumma, E.E. Camp, F. Cao, and K.K. Murray



1965–1976

Paper Spray Mass Spectrometry for the Forensic Analysis of Black Ballpoint Pen Inks

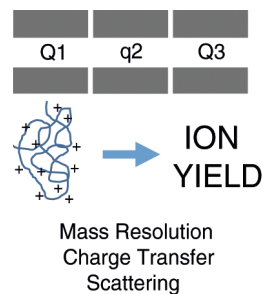
V.S. Amador, H.V. Pereira, M.M. Sena, R. Augusti, and E. Piccin



1977–1986

Investigation of Ion Transmission Effects on Intact Protein Quantification in a Triple Quadrupole Mass Spectrometer

E.H. Wang, D.K. Appulage, E.A. McAllister, and K.A. Schug

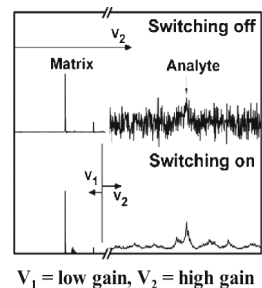


APPLICATION NOTE

1987–1990

Gain Switching for a Detection System to Accommodate a Newly Developed MALDI-Based Quantification Method

S.H. Ahn, T. Hyeon, M.S. Kim, and J.H. Moon



$V_1 = \text{low gain}, V_2 = \text{high gain}$